

Analyzing elasticity of demand simulation



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The paper "Cathode Ray Tubes Televisions - Complementary Products and Substitutes, Ties with Income Elasticity" is a worthy example of a case study on business. Cathode ray tubes (CRT) television sets have been around for a long time. This is the technology that brought the television set into the popular culture and helped the device proliferate among customers worldwide. Circuit City is a store which sells many electronic products including CRT televisions. This store would benefit a lot from economic analysis to determine how factors such as elasticity, substitute products, and complementary products affect the demand for CRT television. This paper analyzes how different economic factors influence the demand and supply of CRT televisions.

During the last five years, the prices of these devices have been going down, a process that has accelerated ever further when the prices of superior technologies began to decline as well during the last couple of years. The demand for cathode ray tube television devices is elastic. The quantity of demand for the devices goes up or down depending on the final sales price of the television set. If a company raises the price of a television set the end-result for the store is a decrease in the demand for television sets.

The complementary products that are directly competing with the cathode ray tube television are flat-screen televisions, liquid crystal display (LCD) and plasma television sets. These prices of these products have gone down during the last year. The CRT television sets are considered the bottom feeder technology in industrialized markets. The quality products provide benefits to the customers such as the utilization of less space to

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accommodate the device and better resolution screens. The cross product elasticity between these devices and the CRT television exist. It is probably low since these devices are luxury products which people obtain to utilize as their primary television sets. Families in Europe and the United States typically have multiple television sets for the rooms of their homes. The CRT television typically serves the purpose of accommodating the need of families for second or third television sets since their prices are relatively low. If the prices of substitute products such as LCD television continue to go down then the cross product elasticity between these products will go up because customers will seriously consider buying the superior product for the other rooms in their homes.

The relationship between income elasticity and CRT television is adverse when the incomes of families go up. When there is extra cash in the economy people want to buy the top quality good they can not acquire during regular and downtimes. In reality, when incomes go up the overall sales of CRT goods go down. During a short period of times when there are extra income such as after-tax season when customer have extra cash, the demand for these goods becomes temporarily inelastic. During these short periods of time lowering sales would actually not increase sales, but instead, it would lower profitability by selling the good at a lower price. The manufacturer of CRT television should decrease the supply of goods. During these times the focus of the customer is acquiring quality goods such as plasma televisions.

The cathode ray tube television industry has benefited from lowering its

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prices a lot. In sophisticated economies such as the United States, economy television sets available at very low prices has allowed families to purchase extra television sets so that all family members in a home have their own television. The industry has also benefited from lower prices since the CRT products can now be effectively marketed as a good that households in developing countries can acquire to fulfill the entertainment needs in a higher percentage of households in developing countries such as Argentina. The best strategy to utilize in developing countries is to increase the quantity supply of CRT televisions.

Complimentary services such as cable television, dish antennas, and video rentals have gone down in prices due to the intense competition in the industry. When the prices of these services go down the overall television sales go up especially in the CRT television industry since family entertainment is cheaper, thus there is a desire to have more television sets in a household. The cross product elasticity of complementary products such as cable television is higher for cathode-ray television than for liquid crystal display television sets.

There are other products that are substitutes of CRT television that are not LCD or plasma television sets. The computer has become a major substitute product of CRT television since broadband internet connections which are on the rise in developed countries have the capability of transmitting movies and videos to people's homes. Lower computer prices hurt the overall sales of CRT televisions. Sales will be hurt further when technologies such as Microsoft's IPTV, Microsoft's digital television technology, is launched into the

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market in the near future (Annual Report Microsoft, 2007). IPTV will provide real-time television through the internet which will make the computer the main source of entertainment in people's homes.

There are factors that affect the demand and supply of products in the marketplace. Price elasticity which refers to how sensitive a product is to fluctuation in its price is one of them. In the example illustrated in this essay, the demand for CRT televisions was elastic, thus lowering the price increases the quantity demand of the product and vice-versa. Substitute products affect the supply of goods manufacturers brings into the marketplace. Substitute products are a non-factor only if the demand for a product is inelastic, this occurs since typically products with inelastic demand have few or no substitute products. In order for product managers to optimize earnings economic applications such as price elasticity, income elasticity or cross-product elasticity must be considered to determine the best price point for a product or service.